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USPT	consolidat\$4 adj1 (bill\$3 payment\$1 request\$1)	95	<u>L4</u>
USPT	consolidat\$4 adj3 (bill\$3 payment\$1 request\$1)	154	<u>L3</u>
USPT	consolidat\$4 near5 (bill\$3 payment\$1 request\$1)	302	<u>L2</u>
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## Document Number 1

Entry 1 of 4

File: USPT

Apr 18, 2000

DOCUMENT-IDENTIFIER: US 6052674 A

TITLE: Electronic invoicing and collection system and method with charity donations

## BSPR:

Because large companies have significant resources and well developed electronic information systems, various electronic systems have been developed to simplify payment processing by individual customers to large vendors. For example, U.S. Pat. No. 5,465,206 to Hilt et al. (assignee: Visa International) describes a bill pay system designed for individual customers to pay their bills through a payment network. The Electronic Bill Presentment and Payment (EBPP) service by Microsoft and First Data Corp. integrates banks, billers, and customers through the internet. The EBPP system consolidates bills from a plurality of suppliers for the customer, who may then authorize payment through his or her bank at any time. U.S. Pat. No. 5,483,445 to Pickering (assignee: American Express TRS) describes an automated billing system which consolidates a plurality of company charges for a customer, collects all payments from the customer, and distributes payments to each company. In each case, the systems are designed to facilitate timely payment receipt for large companies, and makes the bill payment process more convenient for individuals.

## DEPR:

In the five embodiments illustrated by FIGS. 1-5 and the flow charts of FIGS. 6-10, the method is initiated by the transfer of invoice 110 from supplier 102 to EICS 100 via the internet or facsimile. Invoice 110 includes all information relevant to services rendered by supplier 102 for customer 104, including but not limited to a balance owed to supplier 102 by customer 104, a payment due date, terms of payment such as a description of the penalty to be implemented in the case of late payment, and instructions to make payment. The penalty is a surcharge 116 whose amount may be based on a percentage, for example 2%, of the unpaid balance.

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## Document Number 1

Entry 1 of 1

File: USPT

Nov 2, 1999

DOCUMENT-IDENTIFIER: US 5978780 A

TITLE: Integrated bill consolidation, payment  
aggregation, and settlement system

## ABPL:

The present invention is an integrated bill consolidation, payment aggregation, and account-payment application system. The system acts as a settlements exchange for the execution of payments between households or small businesses and the service establishments (principally utilities, financial institutions, telecoms, and others) that serve them. The system eliminates paper check payments without requiring automation at the household level (for example, telephone bill-pay, PC payment systems). The invention provides for the consolidated billing of a plurality of services to a plurality of households, the payment to individual service establishments in aggregate "bullet" transfers (verses individual household payments), and the automated application of payments to service establishment accounts. The present system computes, stores, and communicates the information needed to direct the financial institution processing of debit and credit transactions between thousands of service establishments providing goods and services and millions of consuming households. The system provides for a number of methods of payment, adjusts for partial and delayed payments, and automatically structures and schedules payments in arrears.

## BSPR:

(ii) The personal settlements exchange calculates a consolidated payment or obligation value across all service establishments serving each household. Households agree in advance to pay on a selected date or dates the consolidated amount or an agreed portion thereof;

## BSPR:

(iii) The consolidated payment value, service establishment billing data, and billing statement content and format detail for each household are then

electronically downloaded from the personal settlements exchange to each household's selected bank;

DEPR:

Referring first to FIG. 1, an overview block diagram of the major components of the payment environment of the inventive process is seen, showing the data and payment flows among the components. This is an overview drawing, and several data flows (such as confirmations and verification transmissions) are not shown, but are fully described in the accompanying figures. Service establishments (SE) 101 deliver 11 goods and services to households (HH) 102 and download their service volume and billing detail 12 to a personal settlements exchange (PSX) 103. The personal settlements exchange (PSX) 103 processes this information in several ways, including calculating a payment for each household (HH) 102 (potentially adjusted for the risk of slow, partial and default payments) to each service establishment (SE) 101. This set of payments is consolidated for each household (HH) 102 into a consolidated actual or consolidated proforma payment representing the total obligation value computed for each household.

DEPR:

With this processing completed, the personal settlements exchange (PSX) 103 issues a set of debit instructions 17 to all financial institutions (FIN) 104, including banks, from which households (HH) 102 wish to have their payments made. These financial institutions (FIN) 104 receive and store these instructions, and then debit their individual household members' accounts for the proforma or actual consolidated payment amount (using electronic debit or credit/charge card debit) as instructed by the personal settlements exchange (PSX) 103, and issue payment confirmation 18 to the personal settlements exchange (PSX) 103. The personal settlements exchange (PSX) 103 processes any partial or delayed payments to maximize its cash collections. The personal settlements exchange (PSX) 103 then issues to financial institutions (FIN) 104 detailed instructions to execute the crediting (payment) of service establishment (SE) 101 financial accounts. These financial institutions (FIN) 104 then issue high-value, aggregated electronic transfers 20 to each service establishment (SE) 101 on behalf of the households from which they have received payments during that period, in accordance with the instructions 17, 19 received from the personal settlements exchange (PSX) 103.

DEPR:

The personal settlements exchange (PSX) 103 may or may not supplement these payments from its own reserves in order to meet payment commitments to those service establishments (SE) 101 for which the personal settlements exchange (PSX) 103 takes on full receivables and collection responsibility. The personal settlements

exchange (PSX) 103 then issues 21 to each service establishment (SE) 101 cash application detail to accurately inform the service establishments (SE) 101 which households have paid their bills. Finally, based on the confirmed payments, as well as current period billing information, the personal settlements exchange (PSX) 103 transmits 22 to each financial institution (FIN) 104 the information needed to generate the next period's consolidated statement of payments received and payments due to each service establishment (SE) 101. The financial institutions (FIN) 104 then issue 23 a consolidated billing statement to households (HH) 102, containing all service establishment (SE) 101 data on payments made, current billings, service consumption, and next payment date, among other potential items of information, including advertising and promotional messages that service establishments may wish to communicate to their household accounts .

DEPR:

(ii) creating and formatting of household (HH) consolidated billing and service statements;

DEPR:

(ii) compute 576 the consolidated proforma periodic payment amount sufficient to paying all service establishment (SE) serving household HH(1). The result is a constant consolidated payment amount for paying a plurality of SE's serving the household.

DEPR:

FIG. 4C is a flow diagram outlining the system payment cycle of the invention. Its function and corresponding execution in the data processing components shown in FIG. 3 will now be described. Individual service establishments (SE) download 601, 602 their period service and billing detail data to the personal settlements exchange (PSX) 103 (FIG. 3) from the storage devices 304 and communications controllers 305, through the modem 307 and channel support devices 308 of the personal settlements exchange (PSX) of the present invention. The information is then directed to the database management system 309 for incorporation into the matched and labeled functional database 410 (FIG. 4A). This information is stored 602 (FIG. 4C) in the storage devices 310 (FIG. 3), and processing is executed in the data processing devices 311 of the personal settlements exchange (PSX) system 307 to 311, (FIG. 3). This information is processed 603 in the personal settlements exchange (PSX) data processing system 311 (FIG. 3) and then uploaded 604 to the financial institution (FIN) data processing system where it is stored 605 for later use in generating consolidated billing statements through statement generators 322 and later issued to household (HH) customers. Data communication, uploading, and storage is executed through the personal settlements exchange (PSX) devices

311 personal settlements exchange (PSX) 103 central processing unit (CPU) 311, channel support device 308, modem 318, and communications controller 317. In the financial institution (FIN) sector, the communications controller 319 manages the data flow from the personal settlements exchange (PSX) to the financial institution (FIN), finally leading to storage devices 320. It is anticipated that all communications among the personal settlements exchange (PSX), financial institutions (FIN), and service establishment (SE) would be encrypted for security.

DEPR:

If the past due amount does not exceed one payment period, the current proforma amount can be extended or spread over the current and next periods, or deferred for later payment in full with the next period's payment due. Alternatively, in the event there is more than one past due period, the past due amount may be spread over several future periods, deferred until payments are current, or some combination of these and other options. It may also be the case that only a subset of payments is past due, while others are current. In order to resolve the household (HH) situation rationally and relatively comprehensively, the system will select a consolidated payment rescheduling profile that best achieves the objectives based on criterion established in the procedures table 654 in FIG. 4C.2, such as, for example, minimizing system risk, maximizing feasible payments to the system, or minimizing the implicit or explicit interest expense to the household (HH) of the rescheduling program. Once this is established, the duration of the program can be set and then checked 694, the payment risk factor and proforma payment amounts recomputed 695, and payment instructions sent 696 to the appropriate financial institutions (FIN). The system finally returns 697 to the procedures table of the exception management system for final communications and processing.

CLPR:

3. The method of paying bills of claim 1, wherein the step of calculating an obligation value calculates a constant proforma consolidated payment value.

CLPR:

4. The method of paying bills of claim 1, further including generating a single consolidated billing statement for the purchaser and transmitting the single consolidated billing statement to each purchaser.

CLPR:

5. The method of paying bills of claim 4, wherein the step of generating a consolidated billing statement generates an electronic consolidated billing statement.

CLPR:

6. The method of paying bills of claim 4, wherein the step of generating a consolidated billing statement generates a printed consolidated billing statement.

CLPR:

7. The method of paying bills of claim 4, wherein the step of transmitting a consolidated billing statement is by mail.

CLPR:

8. The method of paying bills of claim 4, wherein the step of transmitting a consolidated billing statement is electronic.

CLPR:

14. The method of paying bills of claim 10, further including the steps of generating a single consolidated billing statement and transmitting the single consolidated billing statement to each purchaser.

CLPR:

15. The method of paying bills of claim 14, wherein the step of generating a billing statement generates an electronic consolidated billing statement.

CLPR:

16. The method of paying bills of claim 14, wherein the step of generating a billing statement generates a printed consolidated billing statement.

CLPR:

17. The method of paying bills of claim 14, wherein the step of transmitting a consolidated billing statement is by mail.

CLPR:

18. The method of paying bills of claim 14, wherein the step of transmitting a consolidated billing statement is electronic.

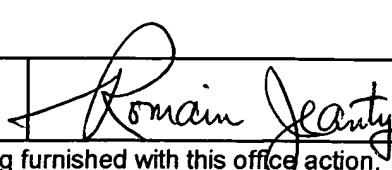
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U.S. PATENT DOCUMENTS							
*		DOCUMENT NO.	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
	A	5,313,013	5/1994	Suzuki et al.	84	622	
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